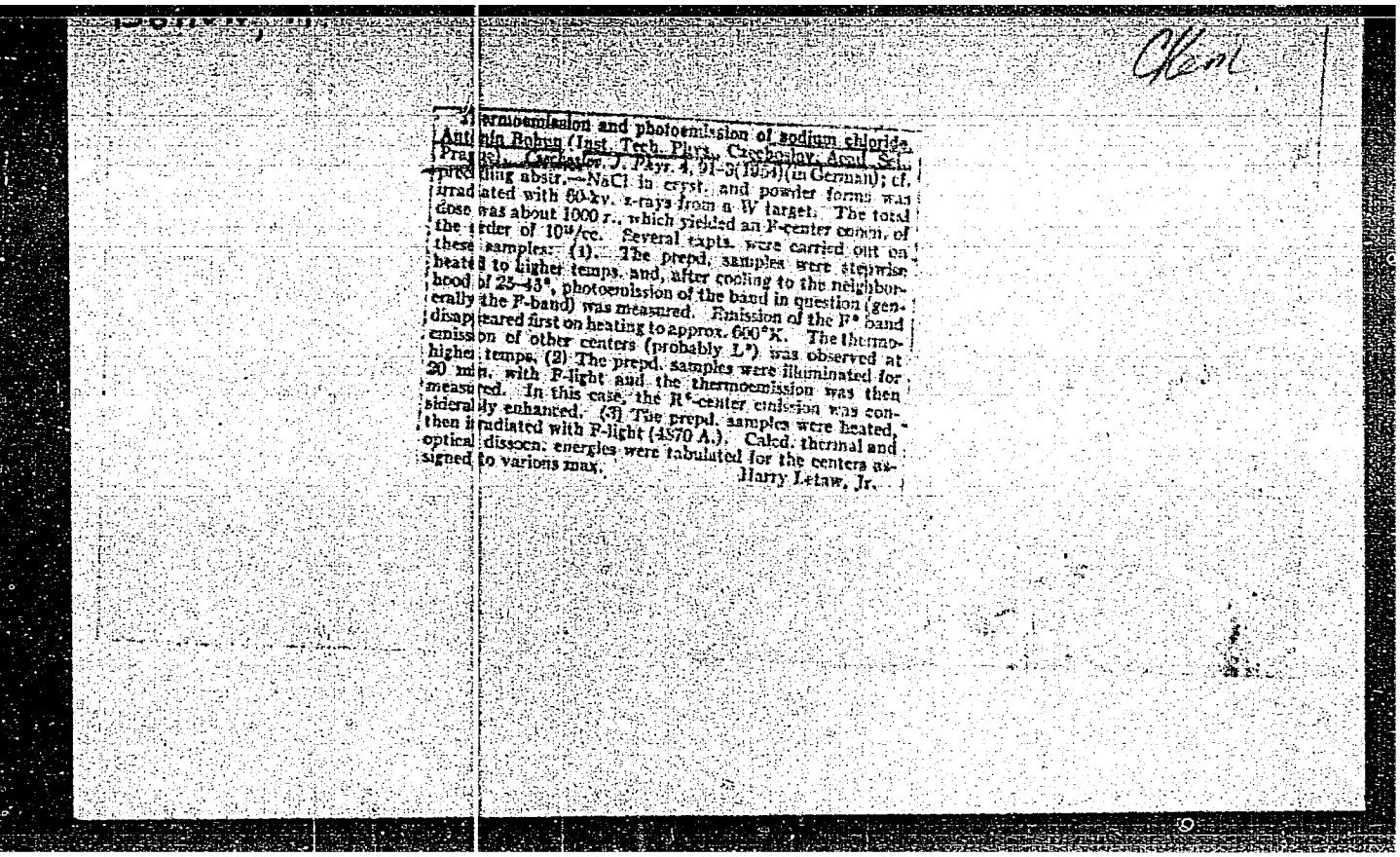


Chem

Thermoemission and photoemission of sodium chloride.
Antonín Bohun (Inst. Tech. Phys., Czechoslovak Acad. Sci., Prague). *Czechoslov. J. Phys.* 4, 91–3 (1954) (in German); cf. preceding abstr.—NaCl in cryst. and powder forms was irradiated with 60-kv. x-rays from a W target. The total dose was about 1000 r., which yielded an F-center concn. of the order of 10^{18}/cc. Several expts. were carried out on these samples: (1) The prepd. samples were stepwise heated to higher temps. and, after cooling to the neighborhood of 25–43°, photoemission of the band in question (generally the F-band) was measured. Emission of the F^* band disappeared first on heating to approx. 600°K. The thermoemission of other centers (probably L^*) was observed at higher temps. (2) The prepd. samples were illuminated for 20 min. with F-light and the thermoemission was then measured. In this case, the R^*-center emission was considerably enhanced. (3) The prepd. samples were heated, then irradiated with F-light (4870 A.). Calcd. thermal and optical dissocn. energies were tabulated for the centers assigned to various max.

Harry Letaw, Jr.

CZECH

Emission from nonmetallic crystals. Antonin Bohun (Czech. Acad. Sci., Prague). Czechoslov. J. Physics, 180-90(1954)(in German); cf. C.A. 48, 8642c, 8857b.—Electron emission is observed on crushed or irradiated nonmetallic crystal only when the crystals have color centers, i.e., when the electrons are found on localized energy levels or in all probability also on special surface energy levels, known as Tamm levels (cf. Tamm, Physik. Z. Sowjetunion 1, 733(1932)). The log of the observed emission when plotted against the log of the time for crushed materials such as fluorite, and for NaCl, old fluorite, and sylvite (KCl) irradiated with x-rays, gives a straight-line relation with almost the same neg. slope (cf. Kramer, C.A. 45, 4515f, 8044g). An open Geiger probe counter which is operated in air at atm. pressure is used in these measurements. The emission intensity as a function of temp. (thermal emission) shows a further max. above 100° besides the one below 100°. These data thus confirm and supplement the data obtained by K. (loc. cit.). These intensity max. depend on the rate of heating and shift to higher temp. for higher rates of heating. These tests indicate the possibility of measuring the thermal energies of color centers and their properties with the aid of probe counter tubes. George Meltzer

BOHUN, A.

Bohun, A. Electronic emissions and color centers in ionic crystals. p. 427. CESKOSLOVENSKY CASOPIS PRO FYSIKU. Praha. Vol. 4, no. 4, Sept. 1954.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 11, Nov. 1955, Uncl.

Bohun, Antonin

Czechoslovakia/Electronics - Photoeffect. Electron and Ion Emission, H-2

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 35107

Author: Bohun, Antonin; Karpiskova, Kveta; Duskova, Alena

Institution: Institute of Technical Physics of Czech. Academy of Sciences

Title: Concerning "Exoelectron" Emission from Metals

Original Periodical: Ceskosl. casop. fys., 1954, 4, No 5, 608; Czech; and Czech. Physics Jl., 1955, 5, No 1, 100-101; German

Abstract: Description of qualitative experiments with oxidized copper, made for the purpose of clarifying the mechanism of the exoelectronic emission from metals. The authors arrive at the conclusion that the emission is caused by dissociation of the F-centers in the oxide layer covering the metal, under the influence of heat and under the action of light.

Card 1/1

BOHUN, A.

Absorption and thermostimulated electron emission and luminescence of LiF crystals bombared with alpha particles. Chekhosl fiz zhurnal 14 no.5:322-327 '64.

1. Institute of Solid State Physics, Czechoslovak Academy of Sciences, Prague 6, Cukrovarnicka 10.

ZA SOCIALISTICKOU VEDA A TECHNIKU-For a Socialist Science and Engineering
Vol. 4, No. 8, August,1954

Radio-active isotopes and their peaceful utilisation.
In Czechoslovakia radio-active isotopes are used mainly in biology and medicine. In engineering they are only used in defectoscopy.
By A. Bohun.....

366

BOHUN, Antonin, RNDr

Pneumoconiosis and special electronic emission. Pracovni lek. 6 no.6:346-348 15 Nov 54.

1. Ustav technicke fysiky CsAV

(PNEUMOCONIOSES, etiology and pathogenesis
theory of disintegrating color centers of inhaled granules causing electronic emissions & absorption of fibrinogen)

BORUN, ANTONIN.

6

Electron emission and color centers in ionic crystals.
Antonín Borun (Czechoslov. Acad. Sci., Prague). *Czechoslov. J. Phys.* 5, 64-79(1955)(in German); cf. *C.A.* 48, 3642c, 8857bc.—Addnl. knowledge is advanced on the electron emission of ionic crystals which are tinted or colored by various means, such as ultraviolet, x-rays, electrolytically, and by additives; and on the more precise correlations between color centers and certain phys. properties, e.g. the photoeffect, thermoluminescence, and activated adsorption. In the additive method, the crystal is heated in the presence of the vapor and then cooled rapidly. In the electrolytic method about 500 v. is applied to the heated crystal between a pointed Pt cathode and a flat graphite anode. For definite materials no essential difference is found in the thermal emission max. of crystals colored by different means. The thermal emission max. corresponding to *F* centers occur always at aprox. 580°K. The ones corresponding to *M* centers occur in the region of 389°K. Definite thermal emission max. correspond to definite electron color centers, which are identical irrespective of how they are colored. All the conclusions are drawn on NaCl crystals.
George Meister

Bohun, Antonin

CZECHOSLOVAKIA/Optics.

K

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10394

Author : Bohun, Antonin
Inst : Institute of Technical Physics, Czechoslovak Academy of Sciences, Prague, Czechoslovakia
Title : Thermoemission and Thermoluminescence of Fluorite.

Orig Pub: Cs. cas. fys. 1955, 5, No 1, 75-85

Abstract: Continuing previous works (Referat Zhur Fizika, 1956, 11659; 1957, 10342), a simultaneous measurement was made of the thermoelectronic emission (TE) and thermoluminescence (TL) of natural crystals of CaF_2 (I), colored by X-ray exposure after discoloring at 900°C. The uncolored I does not display either TL or TE. The curves for TE and TL obtained upon uniform heating from 300 to approximately 350° K, are similar. The peaks A_{TL} and B_{TL} on the TL curve lie at the same temperatures, namely at 360 and 565° respectively. The peak C_{TL} frequency lies at a lower temperature than that of C_{TE} (the peaks

Card : 1/3

CZECHOSLOVAKIA/Optics

K

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10394

C lie between A and B). In the region between the peaks A_{TL} and B_{TL} the color of the thermoluminescence changes twice. Results for X-ray exposed I are the same as for I with natural coloring. Upon maintaining X-ray exposed I at 20°, the peaks A_{TE} and A_{TL} decrease, while the peaks B_{TE} and A_{TL} increase. For I, exposed to X-rays at -186° C, one observes two other peaks of thermoluminescence at approximately 100 and approximately 200°K. On the basis of the results obtained, and as well as results of works cited, it is concluded that the thermoelectronic emission and thermoluminescence are due to electrons liberated from the same color centers, and therefore the energy of the dissociation of these centers can be determined from the thermoelectronic emission curves by a method analogous to the analysis of the thermal-glow curves for these phosphors. Thermoluminescence has two components, a bimolecular one and a monomolecular one. The work function does not affect the thermoelectronic emission, this being due to the

Card : 2/3

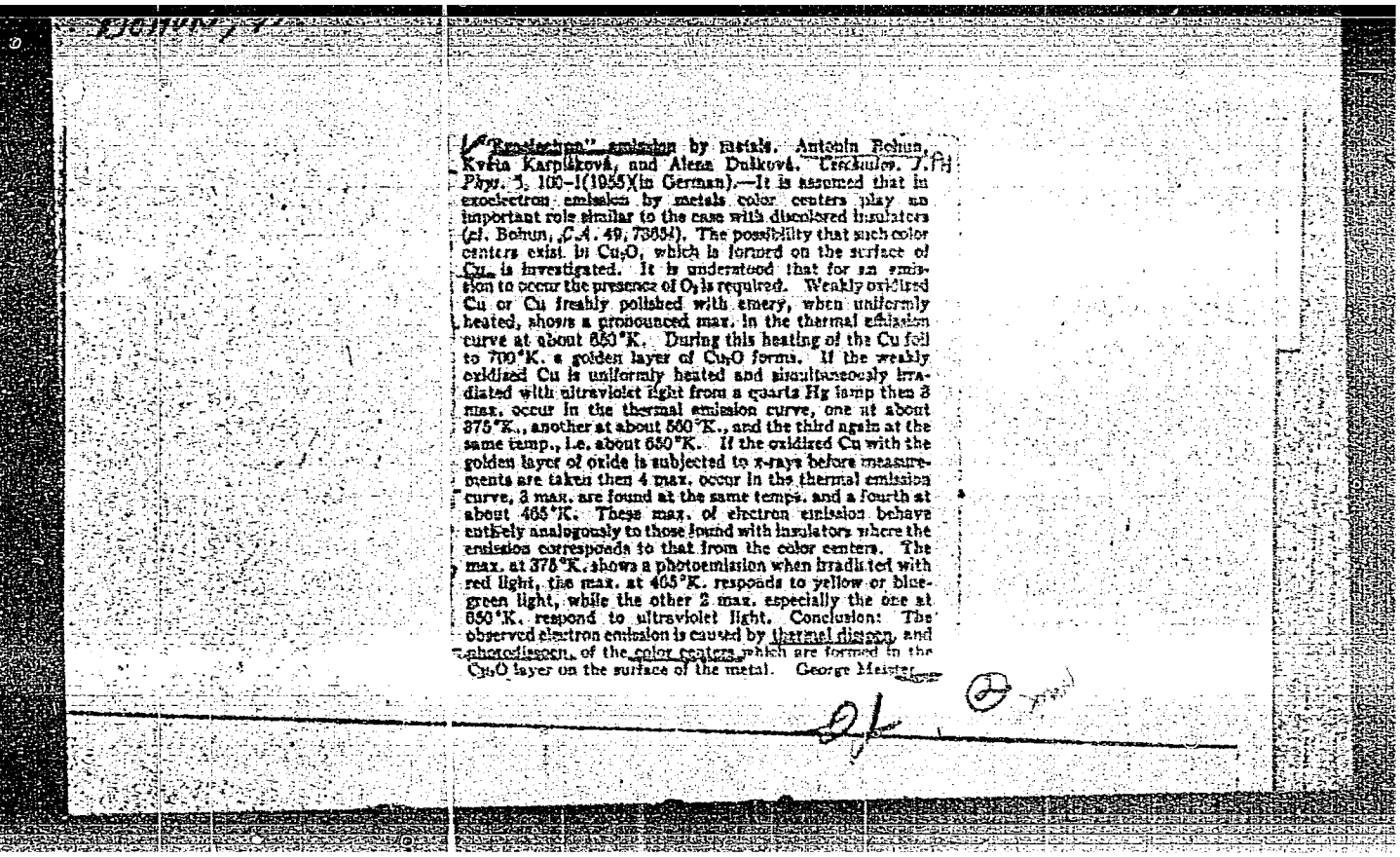
CZECHOSLOVAKIA/Optics.

K

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10394

larger velocity of the thermoelectrons liberated from the color centers. The peaks A, B and C are ascribed respectively to the F_2^-, F, and F_2^+ centers. A band scheme for the process is proposed.

Card : 3/3



"Exoelectron" emission by metals. Antonín Bohun, Květa Karpíšková, and Alena Dulková. Československ. J. Phys. 5, 100–1(1955)(in German).—It is assumed that in exoelectron emission by metals color centers play an important role similar to the case with discolored insulators (cf. Bohun, C.A. 49, 7385d). The possibility that such color centers exist in Cu_2O, which is formed on the surface of Cu, is investigated. It is understood that for an emission to occur the presence of O_2 is required. Weakly oxidized Cu or Cu freshly polished with emery, when uniformly heated, shows a pronounced max. in the thermal emission curve at about 650°K. During this heating of the Cu foil to 700°K. a golden layer of Cu_2O forms. If the weakly oxidized Cu is uniformly heated and simultaneously irradiated with ultraviolet light from a quartz Hg lamp then 3 max. occur in the thermal emission curve, one at about 375°K., another at about 560°K., and the third again at the same temp., i.e. about 650°K. If the oxidized Cu with the golden layer of oxide is subjected to x-rays before measurements are taken then 4 max. occur in the thermal emission curve, 3 max. are found at the same temps. and a fourth at about 465°K. These max. of electron emission behave entirely analogously to those found with insulators where the emission corresponds to that from the color centers. The max. at 375°K. shows a photoemission when irradiated with red light, the max. at 465°K. responds to yellow or blue-green light, while the other 2 max. especially the one at 650°K. respond to ultraviolet light. Conclusion: The observed electron emission is caused by thermal disexcn. and photodisexcn. of the color centers which are formed in the Cu_2O layer on the surface of the metal. George Meister

Thermal emission and thermal luminescence in fluorite. Anton Bohun. [illegible] — The thermal emission and thermal luminescence in natural fluorite are [illegible] simultaneously. Natural fluorite is treated 3.5 hrs. at [illegible] to destroy its color and then rapidly cooled. This decolorized fluorite shows neither thermal emission nor thermal luminescence. The fluorite coloring is regenerated by [illegible] with soft x-rays at different temps., room temp., [illegible] and 180°. The crystals become green to violet. The emission max. and the luminescence max. occur at [illegible] and 501°K. These results on fluorite crystals are also found to agree with those on powd. fluorite. The thermal emission is found to be electronic. From the thermal luminescence curve the heats of dissocn. for the F and F' color centers can be calcd. The energy necessary for these color centers is 2.61 and 0.45 e.v., resp. The different max. observed in the thermal emission and thermal luminescence curves correspond to the different F color centers. George Meister

535.377 ; 537.561

257. COLORATION AND LUMINESCENCE IN CORUNDUM

A.Bohun.

Czech. J. Phys., Vol. 5, No. 3, 429-30 (Aug., 1955). In German.

The variations of thermoluminescence and thermo-electron emission with temperature are measured for X-ray colored Al_2O_3 crystals and show correlation with each other.

G.F.J.Garlick

Bohun A.

Czechoslovakia/Physical Chemistry - Crystals, B-5

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 230

Author: Bohun, A.

Institution: None

Title: The Effect of Additives on the Color, Electron Emission, and Luminescence of X-Ray Irradiated Ionic Crystals

Original Periodical: Ceskosl. casop fys., 1955, Vol 5, No 6 (also published in German with a Russian summary in Chechosl. fiz. zh., 1956, Vol 6, No 2, 141-151)

Abstract: Single crystals of NaCl were drawn from a melt containing additives, the content of which was determined in the finished crystals by the polarographic method, and was found to be as follows: Ag, $6 \cdot 10^{-4}$; Ca, 10^{-3}; and Pd, $8 \cdot 10^{-4}$. After irradiation with X-rays at 16-18° C the crystals were uniformly heated from 300 to 700° K; during heating the thermal emission (TE) and thermal luminescence (TL) curves were recorded. The nature and concentration of the additives have a considerable effect on the formation of long-wave absorption bands

Card 1/2

Czechoslovakia/Physical Chemistry - Crystals, B-5

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 230

Abstract: (O- and N-centers with low ionization energies). The TE and TL peak at ~350° K is caused by M-centers and is observed in all cases, while the TE and TL peak at ~560° K is caused by the F-centers and depends to a great extent on the nature of the additives. The TE and TL peak at 350° K disappears after standing at ~18° C for 20 hours. Contrary to the conclusions drawn by Hill and Schwade (Referat Zhur - Khimiya, 1956, 18594)10), the author concludes that in addition to the F-centers there exist a whole series of localization levels in the vicinity of the conduction band which produce TE peaks. It is estimated that the thermal ionization energy of the F-center is equal to 1.25 and not 1.03 ev (Referat Zhur - Khimiya, 1956, 18610). It is indicated that TE and TL are independent processes each of which can occur in the absence of the other. Natural fluorspar was roasted in an Fe-tube in air at 940° C and rapidly cooled; after X-ray irradiation the fluorspar exhibited a green color and emitted a sharp yellow TL. When the same treatment was applied to fluorspar using a quartz tube a violet color was observed together with a very weak TL. It is concluded that the green color was not due to the presence of rare earths but to some other additive.

Card 2/2

BOHUN, ANTONIN

Category : CZECHOSLOVAKIA/Electricity - Dielectrics G-2

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 1499

Author : Bohun, Antonin
Title : Effects of Impurities on the Color, Electron Emission, and Luminescence of Ion Crystal Exposed to X-Rays

Orig Pub : Chekhosl. fiz. Zh., 1956, 6, No 2, 141-151

Abstract : See Also Ref. Zhur. Fiz., 1956, 31955

Card : 1/1

Bohun, Antonin

Czechoslovakia/Electronics - Photoeffect. Electron and Ion Emission, H-2

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 35090

Author: Bohun, Antonin

Institution: None

Title: On the Problem of Thermal Emission from Semiconductors

Original Periodical: Czech. Phys. Jl., 1956, 6, No 2, 198-199; German

Abstract: See also Referat Zhur - Fizika, 1956, 23062

Card 1/1

Bohun, A.

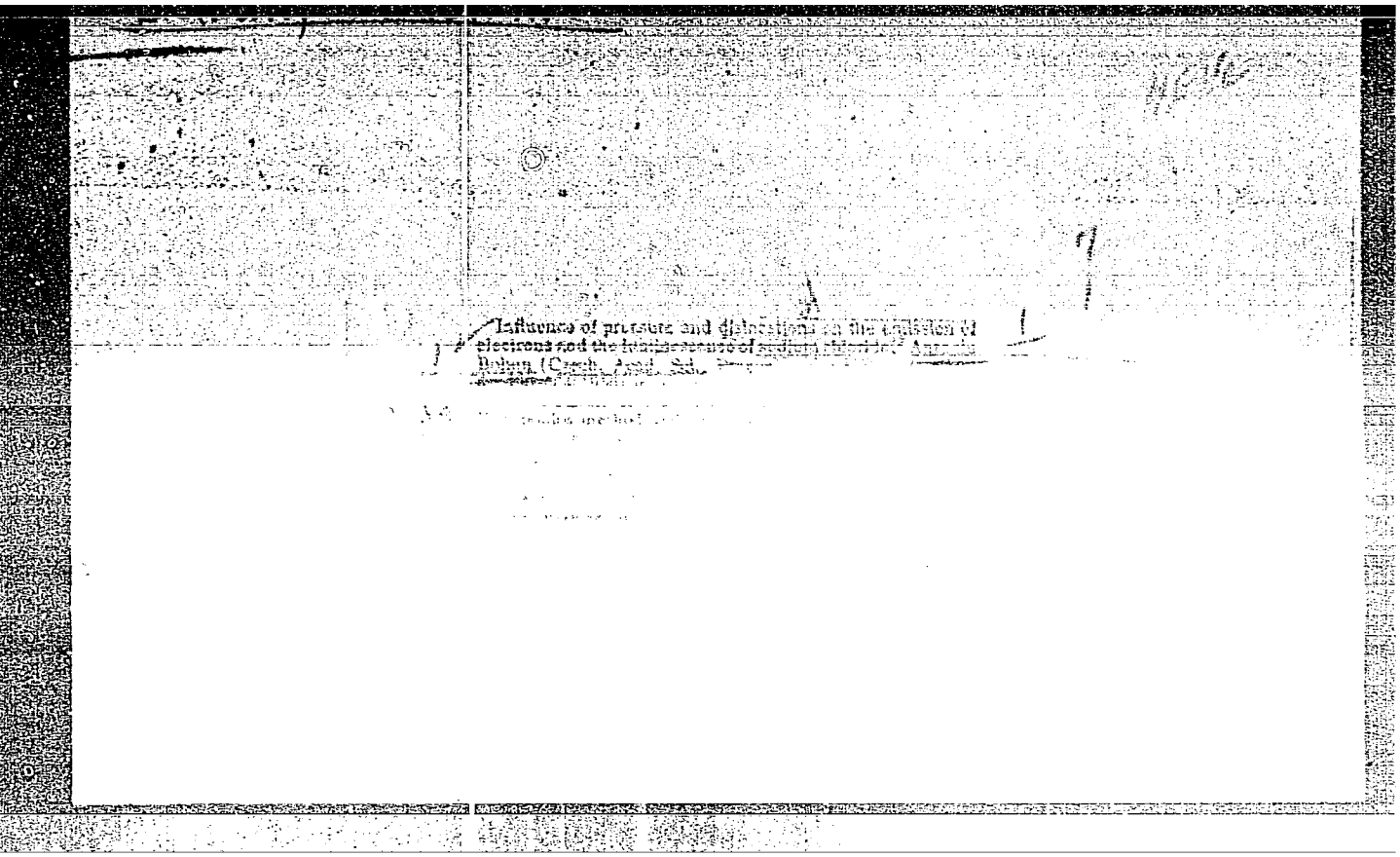
Problem of heat emission in semiconductors with a homopolar bond.
P. 221
CESKOSLOVENSKY CASOPIS PRO FYSIKU. (Ceskoslovenska akademie ved. Ustav technicke fysiky) Praha
Vol. 6, no. 2, Mar. 1956

Source: EEAL - LC Vol. 5. No. 10 Oct. 1956

Bohun, A.

Visit of Soviet physicists to Czechoslovakia. P. 231
CESKOSLOVENSKY CASOPIS PRO FYSIKU. (Ceskoslovenska akademie ved. Ustav technicke fysiky) Praha
Vol. 6, no. 2, Mar. 1956

Source: EEAL - LC Vol. 5. No. 10 Oct. 1956



Influence of pressure and dislocations on the injection of electrons and the luminescence of

BOHUN, A.

Report on the International Conference on Luminescence in Paris. p. 605. (CESKOSLOVENSKY CASOPIS PRO FYSIKU, Vol. 6, No. 5, Sept 1956, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 12, Dec 1957. Uncl.

Electron emission of ferrites irradiated by x-rays. Alfonz Bohun and Arnošt Bergstein (Czechoslov. Acad. Sci., Prague). *Czechoslov. J. Phys.* 6, 827(1956)(in German).—The ferrite $Fe_2O_3.ZnO$ itself is not ferromagnetic but is used as an additive to modify mixed ferrites. The measurements were made with a series of samples by using the method of combination of thermionic emission and thermoluminescence (*C.A.* 49, 15498e). ZnO (0.001% Ca, traces of Mg, Mn, Pb) is wet mixed with the stoichiometric amt. of Fe_2O_3, the latter prepd. by dissolving carbonyl Fe in HNO_3 and igniting the salt; at a pressure of 2000 kg./sq. cm. pellets are pressed and heated in the air to 1270° during 3 hrs. Then, they are slowly cooled down. The reaction is monitored through inspection of the pellet x-ray diffraction picture. At temps. 300-700°K., a fragment of a pellet is irradiated with 35-kv. x-rays, 1800 ma. min., W target, Be window, focal distance of the fragment from target 4 cm. Diagrams of thermoemission and thermoluminescence are shown for $Fe_2O_3.ZnO$ and for ZnO. Manfred Mannheimer

21 27 6

Electron emission from sulfides excited by x-rays. Antonín Rojnun (Czechoslov. Acad. Sci., Prague). Czechoslov. J. Phys. 5, 628(1955)(in German).—Expts. were conducted as described elsewhere (C.A. 49, 15198e). Rate of heating has been about 1.9°/sec. The powder sample was irradiated with 35-kv. x-rays, 1800 ma. min., W target, Be window, at 4 cm. distance from the focal point. A graph shows thermionic emission and thermoluminescence of [Zn·Cd]S:Zn. The phosphor ZnS:Ag shows simultaneous pronounced max. for thermionic emission and thermoluminescence around 380°K. At temps. below room temp. a more complicated emission behavior is expected from analogy to luminescence (Kastúrek, ibid. 349; Garlick, Luminescent Materials 1948, C.A. 44, 942a). Cases are possible with sulfides where luminescence takes place at the recombination of a conduction electron with a luminescence center (Schön-Klasens model). Manfred Mannheimer

pa
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Bohun, A

CZECHOSLOVAKIA/Electronics - Electron and Ion Emission H-2

Abs Jour : Ref Zhur - Fizika, No 11, 1958, No 25643

Author : Bohun Antonin, Trnka Jaroslav
Inst : Institute for Technical Physics, Czechoslovak Academy of Sciences, Prague, Czechoslovakia

Orig Pub : Ceskosl. casop. fys., 1957, 7, No 6, 699-708.
Also in : Ceskoslov. Fiz. Zhur., 7, No. 6, pp. 702-713, 1957.

Abstract : In the previous works by Bohun it has been shown that in different crystals of X-ray treated NaCl there appear, in different manners, high temperature maxima of electron emission and thermoluminescence, particularly those that lie in temperatures of approximately 520° and 580°K. This can be explained by the presenceof neutral chlorine. In the present work, measurements have been performed with crystals, grown from solutions and drawn out of the melt, and also with tablets, pressed under pressure of 2500 kg/cm^2, heated as usual in atmosphere of chlorine. On the basis of the experiments (particularly for the case of crystals with stoichiometric excess of chlorine) the author reaches the conclusion that

Card : 1/2

Abs Jour : Ref Zhur - Fizika, No 11, 1958, No 25643

the sources of the electrons for the above maxima of thermal emission and luminescence are various color centers, the absorption bands of which overlap the bands of the F centers. The nature of these centers is discussed.

Card : 2/2

HUNGARY/Optics - Luminescence

Abs Jour : Ref Zhur - Fizika, No 11, 1958, No 26247

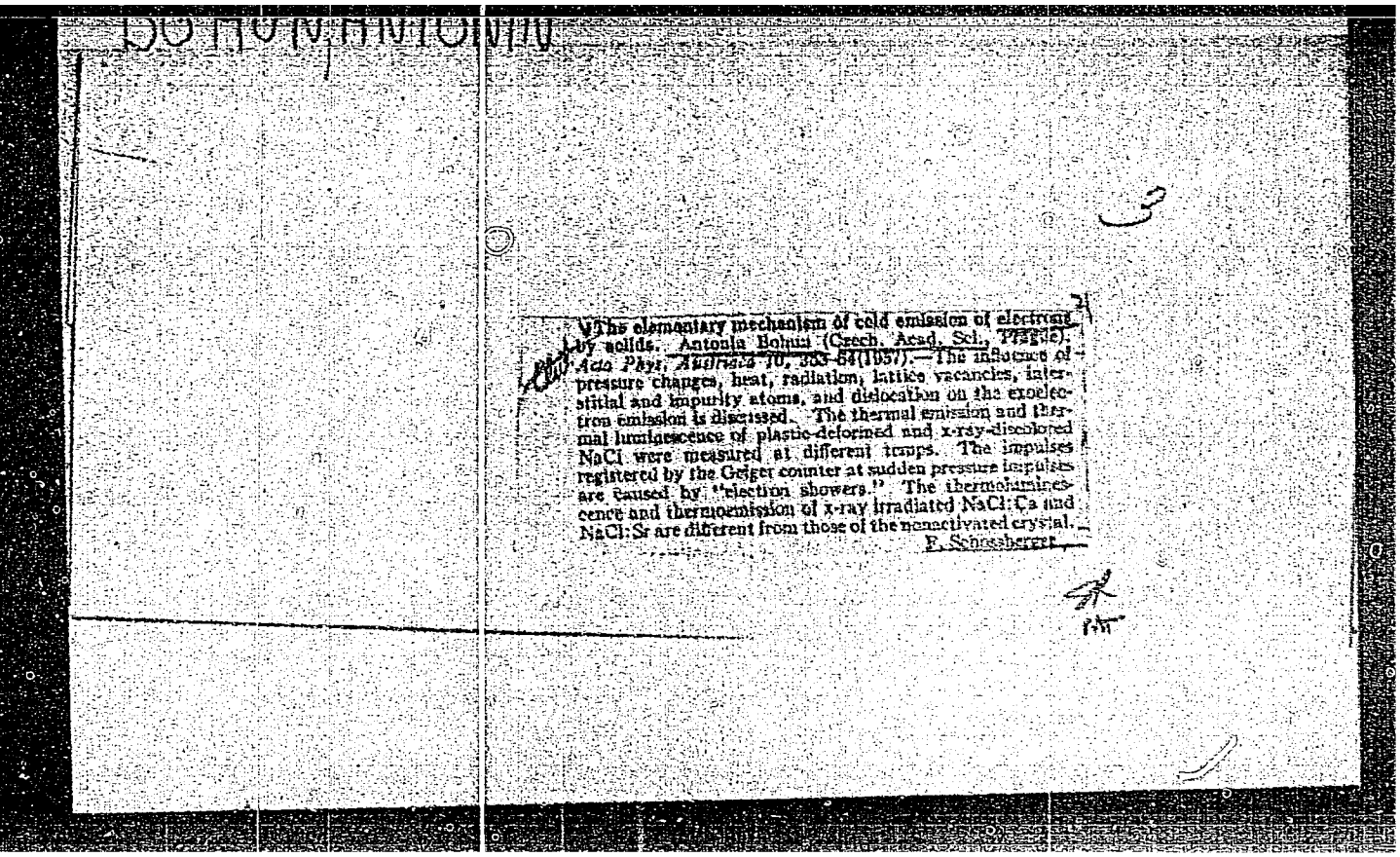
Author : Bohun
Inst : Institute of Technical Physics, Czechoslovak Academy of Sciences, Prague, Czechoslovakia
Title : Photostimulated Electronic Phenomena in Colored NaCl Crystals

Orig Pub : Acta phys. Acad. sci. hung., 1957, 8, No 1-2, 65-73

Abstract : An investigation is made of the thermoelectronic emission, thermoluminescence, and photoemission of electrons and of the absorption of light in NaCl crystals, colored by X-rays, with a normal stoichiometric composition and with an excess of Cl. A counter with a needle is used for detection of the emitted electrons. The thermoluminescence was investigated with the aid of a photoelectronic multiplier. The results of the measurements show that the luminescence of the crystals without the excess Cl is quite weak, while crystals with an excess of Cl display intense luminescence even after a short exposure to X-rays. In crystals with excess stoichiometric Cl, sub-

Card : 1/2

---- crystal.



The elementary mechanism of cold emission of electrons by solids. Antonín Bohun (Czech. Acad. Sci., Prague). *Acta Phys. Austriaca* 10, 353-84(1957).—The influence of pressure changes, heat, radiation, lattice vacancies, interstitial and impurity atoms, and dislocation on the exoelectron emission is discussed. The thermal emission and thermal luminescence of plastic-deformed and x-ray-discolored NaCl were measured at different temps. The impulses registered by the Geiger counter at sudden pressure impulses are caused by "electron showers." The thermoluminescence and thermoemission of x-ray irradiated NaCl:Ca and NaCl:Sr are different from those of the nonactivated crystal. F. Schossberger

TABLE OF CONTENTS:

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BOHUN, A.

Electron emission and its relation with other structure-sensitive phenomena in NaCl. A. Bohun (Czech. Akad. Wiss., Prague). *Solid State Phys. Electronics Telecommuns., Proc. Intern. Conf., Brussels* 4, Pt. 2, 927-32(1958)(Pub. 1960)(in German).—Thermal emission of electrons in NaCl parallels its thermoluminescence. Definite peaks occur at various temps., and these are interpreted as emission from *F* centers. An equation is presented relating the electron emission intensity to the work function, abs. temp., ionization energy, frequency factor, dielec. const., rate of heating, and depth of electron below the crystal surface. Good agreement is shown between the theoretical and exptl. observed intensities. John A. Bommann

BOHUN A.

CZECHOSLOVAKIA/Optics - Luminescence. K

Abs Jour : Ref Zhur Fizika, No 1, 1960, 2117

Author : Dolejsi, J., Kanturek, J., Bohun, A., Truka, J.

Inst : -

Title : Luminescence, Coloring and Exoelectronic Emission by Different Methods from Colored Crystals of CaF_2

Orig Pub : Ceskosl. casop. fys., 1958, 8, No 4, 453-464

Abstract : To observe certain optical and electrical phenomena in CaF_2 crystals, the authors have used a complex method, consisting of measuring two quantities that characterize simultaneously the porucesses that take place. One of these was always the integral thermoluminescence, while the other was either the thermoemission, or the thermal absorption, or the thermoluminescence as a function of the frequency. The measurements ware carried out at a constant temperature or at a temperature that was gradually increasing

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CZECHOSLOVAKIA/Optics - Luminescence. K

Abs Jour : Ref Zhur Fizika, No 1, 1960, 2117

5) the spectral analysis of thermoluminescence shows that in luminescence processes impurities of heavy metals play a substantial role, such as copper. The observed emission band near 3,850 Å belongs apparently to this element. -- V.Kopetskiy

Card 2/2

CZECHOSLOVAKIA/Optics - Luminescence. K

Abs Jour : Ref Zhur Fizika, No 2, 1960, 4535

2) thermal discoloring, 3) EE. The results for various crystals are quite different. In all the investigated crystals one can, by suitable heat treatment and coloring, attain a situation whereby the principal maximum of thermally stimulated EE are located 370, 480 and 650° K (rate of heating 2°/sec), and the corresponding absorption bands are located near 5800 Å and near 5200 and 3600 Å. The curves of thermal discoloration have qualitatively the same appearance for all wave lengths in the visible and the ultraviolet regions. This is due to the strong overlap of the individual absorption bands and makes it impossible to employ the method of thermal discoloration for a mutual comparison of the maxima of thermally stimulated EE, TL, and absorption. In crystals colored by the combined method, only the first low temperature maxima of TL and EE coincide (440° K). The EE has another strong maximum at 650° K, but the luminescence

Card 2/3

Distr: 4E2d(b) 2 cys/4E3a(w) 2 cys

The exoelectron and thermionic electron emissions of several alkali halides. Antonín Bohun and Jarmila Doleží (Czechoslov. Acad. Sci., Prague). *Czechoslov. J. Phys.* 9, 578–89(1959)(in German).—The authors compare the exptl. and theoretical thermionic emission curves of the monomol. and bimol. processes of NaCl and CaF_2 crystals which contain *F* centers. The influence of the work function on the position and intensity of the thermionic maxima is considered. The results permit some conclusions concerning the emission from oxide-coated cathodes. A. Kremheller

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AUTHORS: Sujak, B., Bohun, A. POL/45-18-5-3/11

TITLE: On the Shammed Thermo-excited Coelectron Emission of Hydrates

PERIODICAL: Acta Physica Polonica, 1959, Vol 18, Nr 5, pp 419-425 (Poland)

ABSTRACT: Open-air point counters respond to crystal water (freed from the sample) with maxima of the counting rate. A sharp-pointed counter with corona discharge responds with streamers only to α-particles and steam but is not able any more to record single exo-electrons. It is, however, possible to measure the "water-glow-curves" in analogy to the exo-electron glow curves (Refs 2, 3, 4). This paper brings the results obtained by means of another device (Ref 1) at the Institute of Physical Engineering of the Czechoslovakian AS. The little sphere in the Geiger counter was replaced by an ordinary grammophone needle. Counting rate and temperature course were recorded photographically together with the shammed emission. Crystal pieces of the following hydrates were investigated: $Na_2SO_4 \cdot 10H_2O$; $BaCl_2 \cdot 2H_2O$; $Na_2S_2O_3 \cdot 5H_2O$ and $CuCl_2 \cdot 2H_2O$. A first heating of the sample gave rise to nonlinear temperature course and sharp maxima in the water glow curve (Figs 2-5) due to

Card 1/2

On the Shammed Thermo-excited Coelectron Emission of Hydrates POL/45-18-5-3/11

crystal water evaporation (noticeable because of the low heat capacity of the heater), a second heating left the temperature rise linear like in the case of the empty heater. Also in the case of normal working conditions of the counter (response to β- and γ-radiation) the same effects, though somehow reduced, could be observed. The authors thank Mrs. K. Listonová for having carried out the measurements. There are 6 figures and 4 references.

ASSOCIATION: Institut f. Physik d. Polnischen A. d. W., Wrocław; Institut f. Experimentalphysik d. Universität Wrocław (Physics Institute of the Polish AS, Wrocław; Institute of Experimental Physics of Wrocław University). Institut f. Technische Physik d. Tschechoslovakischen A. d. W., Prag (Institute of Physical Engineering of the Czechoslovakian AS, Prague)

SUBMITTED: December 23, 1958

BOHUN, A.

Distr: 4E2c(m)

2
MJW(JD)
1

The effect of annealing on thermostimulated processes of colored sodium chloride crystals. A. Bohun (Czech. Acad. Sci., Prague). *Czechoslov. J. Phys.* 10, 360–5(1960)(in English).—After annealing NaCl the thermoluminescence in the high-temp. max. increases, in agreement with the results of other authors, and simultaneously the thermoemission decreases. This effect is probably caused by the formation of a surface layer, which forms during the evapn. of the Na: this prevents the exit of the electrons from the crystal and erases the vacancies left by the Na evapn. to increase the concn. of the *V*-centers, and thus, the probability of luminescence. 15 references. A. Kremheller—

MW

S/058/62/000/004/044/160
A058/A101

AUTHOR: Bohun, Antonin

TITLE: The electron emission, luminescence and coloring of ionic crystals

PERIODICAL: Referativnyy zhurnal, Fizika, no. 4, 1962, 30, abstract 4V217 (Elektronová emise, luminiscence a zbarvení iontových krystalu. "Pokroky mat., fyz. a astron.", 1961, v. 6, no. 3, 150-153, Czech.)

TEXT: This is a short survey of zone structure and electronic processes in ionic crystals. Processes associated with crystal luminescence, coloring, conductivity and electron emission of crystals are examined.

[Abstracter's note: Complete translation]

Card 1/1

BOHUN, A.; DOLEJSI, J.; KADERKA, M.; KANTUREK, J.; KUNZLOVA, I.; LEBL, M.; TRNKA, J.

Photoluminescence and related phenomena of NaCl crystals containing Cd and Co. Acta phys Hung 14 no.2 3:246-253 '62.

1. Institut fur Technische Physik der Tschechoslovakischen Akademie der Wissenschaften, Prag, CSSR. Vorgelegt von G. Szigeti [Gyorgy Szigeti]

S/194/62/000/006/172/232
D201/D308

AUTHOR: Bohun, A.

TITLE: Exoemission from solids

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 6, 1962, 45, abstract 6Zh298 (Chekhosl. fiz. zh., 1961, B. 11, no. 11, 819-827)

TEXT: The temperature dependence of photo-emission (for $\lambda \sim 250$ mμ) and the thermally stimulated emission from either mechanically or chemically processes Au - and Al - foil was investigated using an open geiger counter. With uniform heating of mechanically cleaned samples of Au the photoemission decreases in the region 300-370°K and then rises again, going through a maximum at about 600°K. A maximum in this range of temperatures is also observed with the temperature changes reversed and in certain cases when the foil is heated in darkness after ultra-violet irradiation. The maximum is much less pronounced at repeated measurements. The author supposes that the increase and decrease of the emission is related to the photo-adsorption and photo-desorption of gases at the emitter sur-

Card 1/2

Exoemission from solids

S/194/62/000/006/172/232
D201/D308

face. The character of emitted particles (electron, negative ions) is not determined. 23 references. [Abstracter's note: Complete translation.]

Card 2/2

S/194/62/000/006/173/232
D201/D308

AUTHORS: Bohun, A., and Vinduškovă, O.

TITLE: Electron emission from NaCl crystals after electron bombardment

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 6, 1962, 45-46, abstract 6Zh299 (Chekhosl. fiz. zh., 1961, B. 11, no. 11, 843-845)

TEXT: A thermally stimulated emission and thermo-luminescence were measured for blue colored NaCl monocrystals (maximum of absorption about 570 mμ), irradiated by a high energy (about 10 KeV) electron beam. The fundamental maximum of thermally induced electron emission for blue crystals is found to be ~600°K. It is shown that the stimulation spectrum of photo-induced emission of NaCl monocrystals colored [Abstracter's note: This is the literal meaning of the word used] either by electrons or ultra-violet light, differs from that of X-ray induced emission in crystals (a continuous increase towards short λ in the first case and a band near the F-band in the second). [Abstracter's note: Complete translation.]

Card 1/1

BERGSTEIN, A.; BOHUN, A.

Manganese magnesium ferrites. III. Emission of exoelectrons. Coll Cz Chem 26 no.3:747-752 Mr '61. (EEAI 10:9)

1. Institute of Technical Physics, Czechoslovak Academy of Science, Prague.

(Electrons) (Magnesium manganes ferrates)

Z/055/62/012/004/008/008
I030/I230

AUTHOR: Bohun, A.

TITLE: Thermally stimulated exoemission and luminescence of MgO and CaO

PERIODICAL: Chekhoslovatskiy fizicheskiy zhurnal, v. 12, no. 4, 1962, 328–330

TEXT: The thermoemission (TE) and themoluminescence (TL) of radiation-colored MgO and CaO powders were measured to complement other optical and electrical methods of investigation. TE and TL curves for MgO (300°K to 800°K) and CaO (300°K to 700°K) show essentially parallel behavior for each sample. Periclase single crystals containing some percents of iron showed weaker TE and a TL curve differing from that of MgO powder. The similar shape of TE and TL curves for these oxides of not toohigh an electron affinity show again that exoemission, with color centers or colloids serving as electron sources, is important in these cases and not only for alkali halides. There are 2 figures.

ASSOCIATION: Inst. f. Festkörperphysik d. Tschechsl. A. d. W., Prag (Institute for Solid State Pnysics, Czechoslovak AS Prague)

SUBMITTED: October 25, 1961

Card 1/1

G/030/63/003/002/001/012
B163/B138

AUTHORS: Hüml, K., and Bohun, A.

TITLE: Optical and electrical effects in LiF crystals with cobalt

PERIODICAL: Physica status solidi, v. 3, no.2, 1963, 250-253

TEXT: LiF crystals were grown from the melt, which contained 1 mole percent CoF_2. Optical absorption measurements performed with the spectrophotometers CF 4 of Optica Milano and SE 2-M at room temperature show that the non-irradiated crystals have absorption bands in the yellow-red and ultraviolet region which do not exist in an aqueous CoF_2 solution. After X-ray irradiation the originally violet-blue crystals become yellow-green, and new absorption bands appear, an F band at 2500 Å, an M band at 4400 Å, and another wide band around 3600 Å. It is concluded that at least two different types of cobalt complex exist in the crystals, probably one of octahedral and one of lower symmetry. Which fluorine ions in the octahedrons are substituted and by what, is not yet clear. Thermal exoelectron emission (TE) and thermal luminescence

Card 1/2

Optical and electrical effects ... G/030/63/003/002/001/012
B163/B138

are studied using the usual Bohun measuring arrangement. For untempered crystals, which were X-irradiated (50 kv, 30 ma, 10 min) immediately before measurement, there was no particular TL but a marked TE-peak at 400°K. When the same crystal was heated to 400°C and quenched, it showed after X-ray irradiation a considerably increased TL up to temperatures above 500°K. This is explained on the assumption that coalesced Co-ions are separated at high temperatures, this increasing the concentration of cobalt complexes. There are 4 figures.

ASSOCIATION: Institut für Festkörperphysik der Tschechoslovakischen Akademie der Wissenschaften, Prag (Institute of Solid State Physics of the Czechoslovakian Academy of Sciences, Prague)

SUBMITTED: November 9, 1962

Card 2/2

TRUTIA, Ath.; BOHUN, A.

Optical behavior of cobalt and nickel ions in various media.
Chekhosl fiz zhurnal 13 no.1:45-54 '63.

1. Ustav fyziky pevnych latek, Ceskoslovenska akademie ved, Praha (for Bohun). 2. Institututl de Fizica al Academiei Romine, Bucuresti (for Trutia).

BOHUN, A.; DOLEJSI, J.; HUML, K.; KANTUREK, J.; KUNZLOVA, I.; LERL, M.; TRNKA, J.

Optical and electric occurrences in sodium chloride crystals activated with copper. Chekhosl fiz zhurnal 13 no.3:211-215 '63.

1. Ustav fyziky pevnych latek, Ceskoslovenska akademie ved, Praha.

BOHUN, Antonin, dr.

"Luminescence" by [CSc.] Karel Patek. Reviewed by Antonin Bohun. El tech obzor 52 no.11: 625-626 N'63.

KAAMBRE, H.; BOHUN, A.

Thermoluminescence and exoelectron emission of KCl phosphors, activated by mercurylike ions. Chekhosl fiz zhurnal 14 no.1:54-62 '64.

1. Physics and Astronomy Institute of the Estonian Academy of Sciences, Tartu, Estonia (for Kaambre).
2. Institute of Solid State Physics, Czechoslovak Academy of Sciences, Praha 6, Cukrovarnicka 10 (for Bohun).

TRNKA, J.; KADERKA, M.; BOHUN, A.

Electric and optical behavior of NaCl crystals doped with calcium. Pt. 1. Chekhosl fiz zhurnal 14 no.1:63-71 '64.

1. Institute of Solid State Physics, Czechoslovak Academy of Sciences, Praha 6, Cukrovarnicka 10.

L 18312-65 EWT(l)/EEC(b)-2 IJP(c)/AFWL/SSD(c)/ASD(a)-5/AEDC(b)/SSD/RAEM(j)/RAEM(i)/ESD(gs)/ESD(t)

ACCESSION NR: AP4049303 Z/0055/64/014/011/0890/0892

AUTHOR: Bohun, A.; Trnka, J.

TITLE: Absorption of alkali halides with lead admixtures

SOURCE: Chekhoslovatskiy fizicheskiy zhurnal, v. 14, no. 11, 1964, 890-892

TOPIC TAGS: spectroscopy, luminophore, luminophore activator, color center, alkali halide, lead admixture

ABSTRACT: The problem of the role played by lead admixtures used as activators in alkali halide crystal luminophores is discussed. The absorption spectra of 7 crystals and 10 solutions of these substances were measured. Lead was always added in the form of the corresponding bivalent lead. It was concluded from a comparison of the positions of the absorption bands in solutions and in crystals that the lead ions form certain complexes with the halide ions and that these complexes constitute the basis of both the absorption and the luminescent centers. The investigation of the physical properties of alkali halide crystals with lead admixtures is to be

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I 18312-65
ACCESSION NR: AP4049303

continued and reported in a future comprehensive paper. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Institute of Solid State Physics, Czechosl. Acad. Sci., Prague

SUBMITTED: 01Jul64 ENCL: 00 SUB CODE: SS, OP

NO REF SOV: 001 OTHER: 009

Card 2/2

BOHUN, A.; TRNKA, J.

Absorption of alkali halides with lead admixture. Chekhosl fiz zhurnal 14 no.11:890-892 '64.

1. Institute of Solid State Physics of the Czechoslovak Academy of Sciences, Prague 6, Cukrovarnicka 10.

BOHUN, A.; [illegible], J.

Influence of irradiation on luminescence and electronic emission of alkali chlorides with copper. Acta physica Pol 26 no.3/4:557-563 S-O '64.

1. Institute of Solid State Physics of the Czechoslovak Academy of Sciences, Prague.

L 8189-66 EWT(1)/EWP(t)/EWP(b) IJP(c) JD

ACCESSION NR: AP5011474 CZ/0055/65/015/007/0530/0532

44,55 44,55

AUTHOR: Bohun, A.; Trnka, J.

TITLE: Diffusion structure of the A absorption band of thallium in KCl crystals

SOURCE: Chekhoslovatskiy fizicheskiy zhurnal, v. 15, no. 7, 1965, 530-532

TOPIC TAGS: potassium chloride, thallium, absorption band, luminescence, luminescence center, physical diffusion

ABSTRACT: The article reports that, in contrast with earlier published data by various authors, the diffusion structure of the A absorption band of thallium in KCl crystals is not as simple as stated in the earlier literature. It is pointed out that if the measurement is made at a lower displacement rate of the wavelengths (1 A/sec) and with slower motion of the recording tape (0.85 mm/sec), then the structure of the absorption band will no longer be as smooth as assumed, but will show a sign of consisting of at least two bands. It is thus concluded that the effect of thallium in KCl is similar to that of lead, as investigated by the authors in an earlier paper (Czech. J. of Phys. v. 14 B, 1964, 890). This conclusion, together with some other experimental data on the luminescence of the Tl center in KCl and its similarity to the Pb center in KCl indicates that in thallium, as well as in lead, the luminescence centers are formed by Tl complexes,

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L 8189-66

ACCESSION NR: AP5018474

and that the diffusion structure and other physical phenomena found can be interpreted in the same way as in the case of lead. Orig. art. has: 2 figures.

ASSOCIATION: Institute of Solid State Physics, Czechoslovak Academy of Sciences, Prague

SUBMITTED: 31Dec64 ENCL: 00 SUB CODE: SS, OP

NR REF SOV: 001 OTHER: 007

nw

Card 2/2

L 20432-66 EWT(1)/EWP(e)/T/EWP(t) IJP(c) JD/AT

ACC NR: AP6000659 SOURCE CODE: CZ/0055/65/015/009/0667/0677

AUTHOR: Bohun, A.; Sak, J.; Psenickova, M.

ORG: Institute of Solid State Physics, Czechoslovak Academy of Sciences, Prague

TITLE: The theory of chemielectron emission of metals

SOURCE: Chekhoslovatskiy fizicheskiy zhurnal, v. 15, no. 9, 1965, 667-677

TOPIC TAGS: electron emission, chemical absorption, metal, secondary emission, molecular interaction, halogen oxygen nitrogen compound, oxidation

ABSTRACT: The theory of potential molecular electron emission of metals bombarded by hot electronegative molecules was investigated. The most frequently quoted theories of chemiemission (chemically excited exoelectron emission), and absorption and oxidation theories were compared by the authors with the hitherto less-known Izmailov-Furman theory of potential secondary emission. The values of yields calculated according to the original or adapted Izmailov-Furman theory are compared with the values of yields measured by Geiger on a series of systems of alkaline metal-halogen molecules (also partly oxygen molecules), and by Lohff and Wüstenhagen on systems of certain non-precious metals (Al, Fe) with oxygen or nitrogen molecules The authors thank Dr. J. Dolejsi and K. Dolezalova for their help during the work and for careful execution of the numerical calculations. Orig. art. has: 13 formulas and 3 tables. [Based on authors' abstract.]

SUB CODE: 07/ SUBM DATE: 30Dec64/ ORIG REF: 004/ OTH REF: 022/ SOV REF: 004/ [NT]

Card 1/1

BOHUN, Eliasz, mgr.inz.

Improvement of the texture of round ingots for seamless tubes. Hutnik P 28 no.7/8:272-274 Jl-Ag '61.

1. Huta Jedrosc.

DVORAK, M.; FOREJTEK, M.; BOHUNEK, V.

Contribution to the problem of subdural hygroma. Rozhl. chir. 43 no.10:693-697 O '64.

1. Neurochirurgicke oddeleni (vedcuci MUDr. B. Zapletal), a neurologicka klinika (predn. prof. dr. J. Hrbek, DrSc.) lekarske fakulty Palackeho University.

LANG, B.A.; BOHUNEK, V.; STEIDL,L.; TRNECKA, J.

Glycoproteins in the cerebrospinal fluid and blood serum in degenerative diseases of the CNS and disseminated spinal cord Sclerosis. Cas. lek. cesk. 103 no.27:732-736 26 Je'64

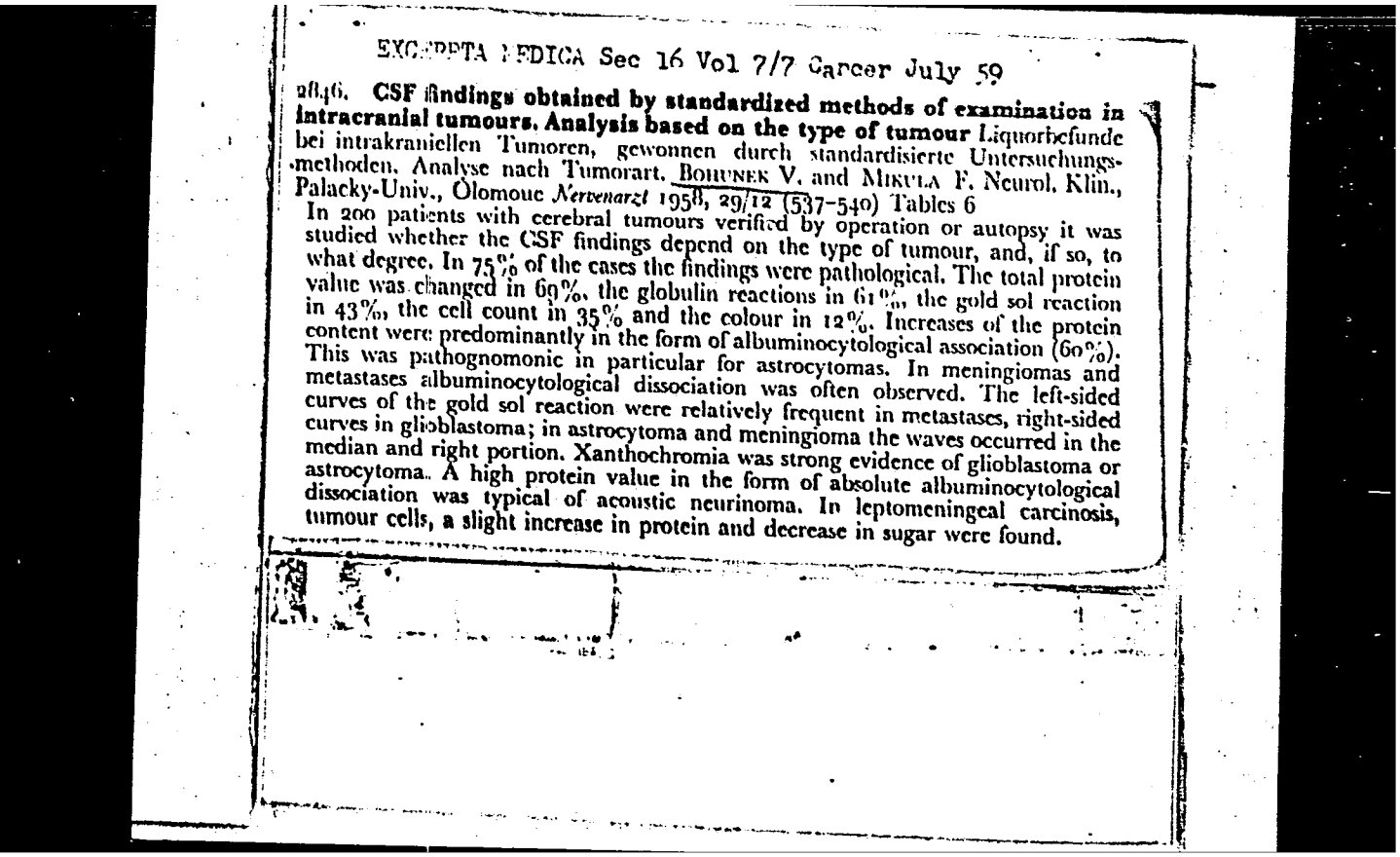
1. Chemicky ustav lekarske fakulty PU [Palackeho university] v Olomouci (prednosta: prof. dr. F.Santavy, DrSc.) a Neurologicka klinika lekarske fakulty PU [Palackeho university] v Olomouci (prednosta: prof. dr.J.Hrbek, DrSc.).

EXCERPTA MEDICA Sec 16 Vol. 5/8 Cancer Aug. 57

3120. BOHUNĚK V. Neurol. Klin. PU, Olomouc. Leptomeningeální karcinosa *Leptomeningeal carcinomatosis* Čas. Lék. čes. 1956, 95/33–34 (917–920)

The primary carcinoma was in the stomach, the metastases only in the leptomeninges of the brain and spinal cord. The (clinical) diagnosis was facilitated as carcinomatous cells were found in the CSF. The primary carcinoma was only found at autopsy. The macroscopic findings on the meninges were negative; diagnosis was confirmed by the microscopical examination.

Henner – Prague



EXCERPTA MEDICA Sec 16 Vol 7/7 Cancer July 59

2846. **CSF findings obtained by standardized methods of examination in intracranial tumours. Analysis based on the type of tumour** Liquorbefunde bei intrakraniellen Tumoren, gewonnen durch standardisierte Untersuchungsmethoden. Analyse nach Tumorart. BOHUNEK V. and MIKULA F. Neurol. Klin., Palacky-Univ., Olomouc *Nervenarzt* 1958, 29/12 (537-540) Tables 6

In 200 patients with cerebral tumours verified by operation or autopsy it was studied whether the CSF findings depend on the type of tumour, and, if so, to what degree. In 75% of the cases the findings were pathological. The total protein value was changed in 69%, the globulin reactions in 61%, the gold sol reaction in 43%, the cell count in 35% and the colour in 12%. Increases of the protein content were predominantly in the form of albuminocytological association (60%). This was pathognomonic in particular for astrocytomas. In meningiomas and metastases albuminocytological dissociation was often observed. The left-sided curves of the gold sol reaction were relatively frequent in metastases, right-sided curves in glioblastoma; in astrocytoma and meningioma the waves occurred in the median and right portion. Xanthochromia was strong evidence of glioblastoma or astrocytoma. A high protein value in the form of absolute albuminocytological dissociation was typical of acoustic neurinoma. In leptomeningeal carcinosis, tumour cells, a slight increase in protein and decrease in sugar were found.

BOHUNEK, V.; KLAUS, E.

Neurological complications in Hodgkin's disease. Cesk.neur. 23 no.3:197-203 Mr '60.

1. Neurologicka klinika lekarske fakulty Palackeho university v Olomouci, prednosta prof. MUDr. et Dr.Sc. Jaromir Hrbek.
(HODGKIN'S DISEASE pathol.)
(SPINAL CORD pathol.)

BOHUS, B.

Discussion on the electric-spark hardening of tools, p. 159, STROJIRENSKA BYROBA (Ministerstvo strojiernstvi) Praha, Vol. 3, No. 4, Apr. 1955

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 5, No. 12, December 1956

ENDROCZI, E.; KOVACS, S.; BOHUS, B.

Changes in behaviour and endocrine activation in response to the stimulation of orbito-frontal cortical areas. Acta physiol. hung. 14 no.1:39-44 1958.

1. Institute of Physiology, Medical University, Pecs.
(CEREBRAL CORTEX, physiol.
eff. of electric stimulation of orbito-frontal areas on behavior & activation of adrenal cortex-pituitary system in rats)
(BEHAVIOR
eff. of electric stimulation of orbito-frontal areas of cerebral cortex in rats)
(ADRENAL CORTEX, physiol.
adrenal cortex-pituitary system, eff. of electric stimulation of orbito-frontal areas of cerebral cortex on activation in rats)
(PITUITARY GLAND, physiol.
same)

BOHUS, B.; ENDROCZI, E.

Metabolism in vitro of hydrocortisone in dog, cat, guinea pig and rat liver. Acta physiol.hung. 18 no.3:179-184 '60.

1. Institute of Physiology, Medical University, Pecs.
(HYDROCORTISONE metab)
(LIVER metab)

BOHUS, B.; ENDROCZI, E.

Metabolism in vitro of cortisone acetate in liver tissue of various species. Acta physiol.hung. 18 no.3:185-189 '60.

1. Institute of physiology, Medical University, Pecs.
(LIVER metab)
(CORTISONE metab)

BOHUS, B.; ENDROCZI, E.

Analysis of the direct adrenal action of neurohypophyseal hormones. Acta physiol. hung. 20 no.3:285-292 '61.

1. Institute of Physiology, Medical University, Pecs.

(ADRENAL GLAND pharmacology)
(PITUITARY GLAND, POSTERIOR hormones)

BOHUS, B.

The effect of central nervous lesions on pituitary-adrenocortical function in the rat. Acta physiol. acad. sci. hung. 20 no.4:373-377 '61.

1. Institute of Physiology, Medical University, Pecs.

(CENTRAL NERVOUS SYSTEM physiol)
(PITUITARY GLAND ANTERIOR physiol)
(ADRENAL CORTEX physiol)

HUNGARY

BOHUS, Bela, and LISSAK, Kalman, of the Institute for Physiology at the Medical University (Orvostudomanyi Egyetem Elettani Intezete) in Pecs.

"Sexual Differences in the Pituitary-Adrenal System of the Adult Rat"

Budapest, Acta Physiologica Academiae Scientiarum Hungaricae, Vol 23, No 1, 1963, pp. 27-32.

Abstract:/ English Article; authors' English summary /On the seventh day following unilateral adrenalectomy a significant difference in compensatory hypertrophy is observed in adult female and male rats in favor of the former. The measure of hypertrophy is not altered significantly by castration, estrogen, or testosterone treatment, carried out simultaneously with the removal of the right adrenal. Studies of the corticosterone output by the hypertrophic adrenal indicate that there is no difference in secretory values between male and female animals. Castration does not effect secretion; estrogen and testosterone increase it moderately. Twenty-four references, 1/1 including 6 Hungarian, 1 Czechoslovakian, and 17 Western.

HUNGARY

BOHUS, Bela, ENDROCZI, Elemer, LISSAK, Kalman; Medical University of Pecs, Institute of Physiology (Pecsi Orvostudomanyi Egyetem, Elettani Intezet).

"Correlations Between Conditioned Avoidance Reflex Activity and Pituitary-Adrenocortical Function in the Rat."

Budapest, Acta Physiologica Academiae Scientiarum Hungaricae, Vol XXIV, No 1, 1963, pages 79-83.

Abstract: [English article, authors' English summary] It has been demonstrated that the performance of the conditioned avoidance reflex in individual rats is more intensive in the animals which have higher resting corticosterone secretion than in rats with low corticosterone secretion.
15 Western, 5 Eastern European references.

1/1

HUNGARY

BOHUS, Bela, ENDROCZI, Elemer, LISSAK, Kalman; Medical University of Pecs, Institute of Physiology (Pecsi Orvostudomanyi Egyetem, Elettani Intezet).

"Further Data Concerning the Sex Differences of the Pituitary-Adrenal System in the Rat."

Budapest, Acta Physiologica Academiae Scientiarum Hungaricae, Vol XXIV, No 1, 1963, pages 85-93.

Abstract: [English article, authors' English summary] In rats aged 27-29 days and 37-39 days, there is no difference in the measure of compensatory adrenocortical hypertrophy between male and female animals, whereas in rats aged 52-56 days, the measure of compensatory hypertrophy is much greater in the female. In vitro corticosterone production by the hypertrophic adrenals increases with age; at the age of 52-56 days, females produce more corticosterone than males. Following contralateral adrenalectomy on the 100th postnatal day, the compensatory adrenal hypertrophy significantly decreased in 107 day old female rats, in response to prepubertal castration. This was unchanged in male rats as compared with sham-operated controls. Estrone treatment given prior to puberty increases the measure of compensatory hypertrophy in the adult male rat, while it leaves the hypertrophy unchanged in the adult female. Prepubertal administration of testosterone produces no effect in either sex. In response to estrogen administration

HUNGARY

Budapest, Acta Physiologica Academiae Scientiarum Hungaricae, Vol XXIV, No 1, 1963, pages 85-93.

before sexual maturation, the corticosterone secretion by the compensatory hypertrophied left adrenal increases in adult males and females alike, whereas it decreases in adult animals ovariectomized between the 22-25 day of their lives. The results indicate that the marked compensatory hypertrophy observed in the adult female rat develops in the period of sexual maturation, in response to estrogens. 20 Western, 6 Eastern European references.

2/2

BOHUS, B.; ENDROCZI, E.

Effect of intracerebral implantation of hydrocortisone on adrenocortical secretion and adrenal weight after unilateral adrenalectomy. Acta physiol. acad. sci. Hung. 25 no.1: 11-19 '64.

1. Institute of Physiology, University Medical School, Pecs.

BOHUS, B.; ENDROCZI, E.

The effect of endogenous diminution of corticosteroid level on pituitary - adrenocortical function. Acta physiol. Acad. sci. Hung. 25 no.4[illegible]-350 '64

1. Institute of Physiology, University Medical School, Pecs.

BOHUS,B.; ENDROCZI, E.

The influence of pituitary-adrenocortical function on the avoiding conditioned reflex activity in rats. Acta physiol. acad. sci. Hung. 26 no.1:183-189 '65

1. Institute of Physiology, University Medical School, Pecs.

BOHUS, B.; ENDROCZI, E.

Regulation of adrenocortical steroid synthesis and adrenal tissue proliferation. Acta physiol. acad. sci. Hung. 28 no.2: 125-131 '65.

1. Institute of Physiology, University Medical School, Pecs.
Submitted December 23, 1964.

BOHUS, B.; ENDROCZI, E.; LISSAK, K.

Studies on the control of the pituitary-adrenal system: stress and humoral feed-back control. Acta physiol. acad. sci. Hung. 27 no.3:279-284 '65.

1. Institute of Physiology, University Medical School, Pecs.

BOHUS, B.; ENDROCZI, E.; LISSAK, K.

Studies on the role of the mesencephalic reticular formation in the motivation and avoiding conditioned reflex processes following the mesencephalic and systemic administration of chlorpromazine. Acta physiol. acad. sci. Hung. 26 no.3:235-243 '65

1. Institute of Physiology, University Medical School, Pecs.

STRAZNICKY, K.; HAJOS, F.; BOHUS, B.

Relationship between the ultrastructure and cortical activity of the embryonic adrenal gland in the chicken. Acta biol. acad. sci. Hung. 16 no.3:261-274 '66.

1. Department of Anatomy, Histology and Embryology, Medical University, Pecs (Head: B. Flerko) and Department of Physiology, Medical University, Pecs (Head: K. Lissak). Submitted April 29, 1965.

L 15489-66

ACC NR: AT6007451 SOURCE CODE: HU/2505/65/026/00X/0051/0051

AUTHOR: Bohus, B.

ORG: Medical University of Pecs, Institute of Physiology (Pecsi Orvostudomanyi Egyetem, Elettani Intezet) B+1

TITLE: Effect of acute and prolonged cortisone administration on the stress-induced activation of the pituitary-adrenal function /This paper was presented at the 29th Meeting of the Hungarian Physiological Society held in Szeged from 2 to 4 July 1964/

SOURCE: Academia scientiarum hungaricae. Acta physiologica, v. 26, Supplement, 1965, 51

TOPIC TAGS: cortisone, endocrinology, dog, cat, corticosteroid, ACTH

ABSTRACT: The effect of acute or prolonged elevation of the plasma corticosteroid level on the stress-induced activation of adrenocortical function has been studied on cats and dogs. In cats which underwent stress with formalin or epinephrine, the activation of adrenocortical secretion reached the same values in animals with an elevated plasma corticosteroid level as in the control animals, although the adrenocortical secretion of animals with elevated cortisone levels was

Card 1/2

L 15483-66
ACC NR: AT6007451

significantly diminished before the stress. Prolonged cortisone treatment depressed the resting corticosteroid output and prevented the epinephrine-induced adrenocortical activation. The response of the adrenals to exogenous ACTH was also diminished in the treated goup. The results indicate that the stress-induced activation of the pituitary-adrenal system is independent of the plasma corticosteroid level in acute conditions, while a chronic elevation of the plasma corticosteroid level results in inhibition of the stress-response by different mechanisms. [JPRS]

SUB CODE: 06 / SUBM DATE: none

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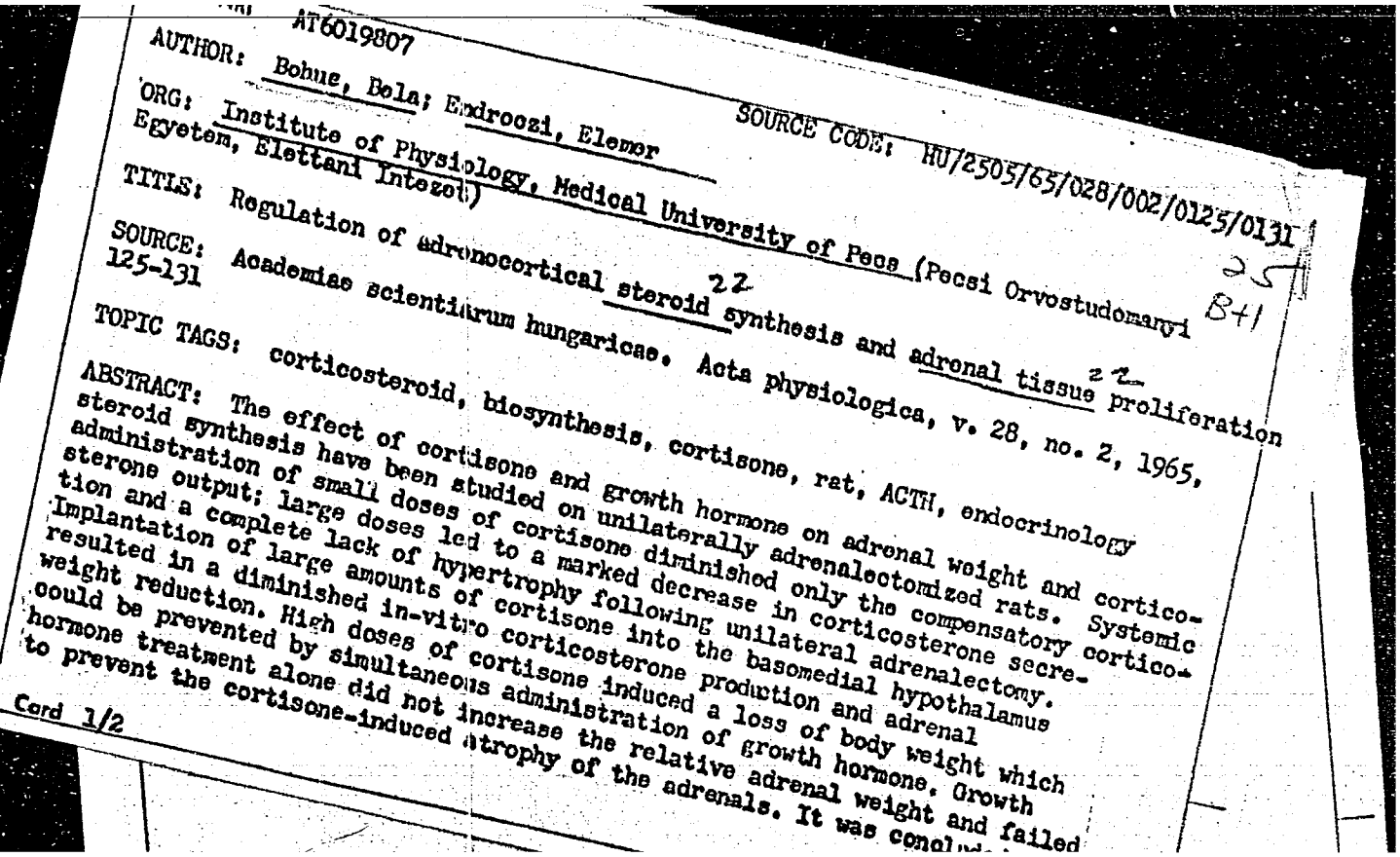
rd 2/2



AT6019807

SOURCE CODE: HU/2505/65/028/002/0125/0131

AUTHOR: Bohus, Bela; Endroczi, Elemer

ORG: Institute of Physiology, Medical University of Pecs (Pecsi Orvostudomanyi Egyetem, Elettani Intezet)

TITLE: Regulation of adrenocortical steroid synthesis and adrenal tissue proliferation

SOURCE: Academiae scientiarum hungaricae. Acta physiologica, v. 28, no. 2, 1965, 125-131

TOPIC TAGS: corticosteroid, biosynthesis, cortisone, rat, ACTH, endocrinology

ABSTRACT: The effect of cortisone and growth hormone on adrenal weight and corticosteroid synthesis have been studied on unilaterally adrenalectomized rats. Systemic administration of small doses of cortisone diminished only the compensatory corticosterone output; large doses led to a marked decrease in corticosterone secretion and a complete lack of hypertrophy following unilateral adrenalectomy. Implantation of large amounts of cortisone into the basomedial hypothalamus resulted in a diminished in-vitro corticosterone production and adrenal weight reduction. High doses of cortisone induced a loss of body weight which could be prevented by simultaneous administration of growth hormone. Growth hormone treatment alone did not increase the relative adrenal weight and failed to prevent the cortisone-induced atrophy of the adrenals. It was concl...

Card 1/2

L 29389-66

ACC NR: AT6019807 SOURCE CODE: HU/2505/65/028/002/0125/0131

AUTHOR: Bohus, Bela; Endroczi, Elemer

ORG: Institute of Physiology, Medical University of Pecs (Pecsi Orvostudomanyi Egyetem, Elettani Intezet)

TITLE: Regulation of adrenocortical steroid synthesis and adrenal tissue proliferation

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Card 1/2

L 29389-66
ACC NR: AT6019807

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the regulation of adrenal proliferation is controlled mainly by pituitary ACTH; the dissociation between adrenal weight and corticosteroid synthesis is thought to be due to the lesser reactivity of adrenal proliferation following changes in ACTH secretion. Orig. art. has: 2 figures and 1 table. [Orig. art. in Eng.] [JPRS]

SUB CODE: 06 / SUBM DATE: 23Dec64 / ORIG REF: 004 / OTH REF: 016
SOV REF: 001

Card 2/2 0C

L 28994-66

ACC NR: AT6019381 SOURCE CODE: HU/2505/65/027/003/0279/0284

AUTHOR: Bohus, Pela; Endroczi, Elemer; Lissak, Kalman

ORG: Institute of Physiology, Medical University of Pecs (Pecsi Orvostudomanyi Egyetem, Elettani Intezet)

TITLE: Studies on the control of the pituitary-adrenal system: stress and humoral feed-back control

SOURCE: Academia scientiarum hungaricae. Acta physiologica, v. 27, no. 3, 1965, 279-284

TOPIC TAGS: dog, cortisone, corticosteroid, adrenal gland, blood physiology, drug effect

ABSTRACT: The role of negative feed-back control in the pituitary-adrenocortical response to stress has been investigated in cats and dogs. A single dose of cortisone acetate diminished significantly the resting corticosteroid output in adrenal venous blood, but it failed to influence the increase in secretion elicited by epinephrine or formalin injections. Prolonged treatment of dogs with cortisone acetate not only depressed the resting corticosteroid output but also decreased markedly the stress-induced activation of pituitary-adrenocortical function. The findings presented refute the possibility of a negative feed-back control in the response of the pituitary-adrenal system elicited by environmental stimuli. Orig. art. has: 3 figures. [Orig. art. in Eng.] [JPRS]

SUB CODE: 06 / SUBM DATE: 26Jun64 / ORIG REF: 006 / OTH REF: 021

Card 1/1 BLG

ACC NR: AT6033361 SOURCE CODE: HU/2505/65/026/01-/0183/0189

AUTHOR: Bohus, B.; Endroczi, E.

ORG: Institute of Physiology, Medical University of Pecs (Pecsi Orvostudomanyi Egyetem, Elettani Intezet)

TITLE: Influence of pituitary-adrenocortical function on avoidance conditioned reflex activity in rats [Paper presented at the symposium of the Hungarian Physiological Society held in Budapest from 2-3 July 1963]

SOURCE: Academia scientiarum hungaricae. Acta physiologica, v. 26, no. 1-2, 1965, 183-189

TOPIC TAGS: conditioned reflex, rat, adrenocorticotropic hormone, endocrinology

ABSTRACT: In the present study, the influence of the pituitary-adrenal system on both the internal inhibitory processes as classified by the Pavlovian terminology and the motivational phenomena accompanied by conditioned reflex behavior have been investigated. The experiments are described in detail. Changes in adrenocortical function were induced by ACTH administration or by bilateral adrenalectomy. In a second set of experiments, the effect of ACTH on extinction of the alimentary conditioned reflex was studied in cats. The results are also presented on graphs. A rather extensive use is made of literature data, in the article. Orig. art. has: 4 figures. [Orig. art. in Eng.] [JPRS]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 005 / OTH REF: 004

Card 1/1

n950 1383

L 43015-66 RO
ACC NR: AT6031825 SOURCE CODE: HU/2505/65/026/003/0235/0243

AUTHOR: Bohus, Bela--Bokhush, B.; Endroczi, Elemer--Endretsi, E.; Lissak, Kalman--Lishshak, K.

ORG: Institute of Physiology, Medical University of Pecs, Pecs (Pecsi Orvostudomanyi Egyetem, Elettani Intezet)

TITLE: Studies on the role of the mesencephalic reticular formation in the modification and avoidance conditioned reflex processes following mesencephalic and systemic administration of chlorpromazine

SOURCE: Academia scientiarum hungaricae. Acta physiologica, v. 26, no. 3, 1965, 235-243

TOPIC TAGS: conditioned reflex, chlorpromazine, brain, rat

ABSTRACT: The effects of chlorpromazine, injected subcutaneously or into the mesencephalic reticular formation in rats during the elaboration and stabilization of an avoidance conditioned reflex, have been studied by analyzing the performance of the reflex and the spontaneous intersignal reactions. In response to the injection of 5-50 µg of chlorpromazine into the mesencephalic reticular formation, the number of spontaneous intersignal reactions decreased significantly without any change in execution of the conditioned reflex. In response to the systemic administration of 0.1 mg/100 g body weight of chlorpromazine, only the number of the intersignal reactions decreased while doses of 0.2-1.0 mg/100 g body weight inhibited also execution of the conditioned reflex and even the motor reactions to the unconditioned stimulus.

Card 1/2 0919 0574

L 43015-66

ACC NR: AT6031825

The results are indicative of involvement of the mesencephalic reticular formation in the organization of the spontaneous goal-directed motor reactions. Orig. art. has: 4 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: 10Dec63 / ORIG REF: 006 / SOV REF: 004
OTH REF: 015

Card 2/2 MLP

0919 0525

Bohus E.

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Remarks on the Hungarian Simplicissimus.

p. 261 (Wierchy) Vol. 25, 1956, Krakow, Poland

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7 NO. 1, JAN. 1958

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Bohus (G.) & Podhradszky (J.). **A búza kőtüszögjét okozó Tilletia-fajok hő- és tala nedvesség igényére vonatkozó vizsgálatok.** [Investigations with regard to temperature and soil humidity claims of *Tilletia* species causing bunt.]—*Ann. hist.-nat. Mus. hung.*, N.S., 3 (*1952*), pp. 37–46, 13 graphs, 1 map, 1953.

In studies on *Tilletia* species in Hungary [cf. *R.A.M.*, 29, p. 92] no essential difference could be detected in the temperature relations of *T. foetida* [loc. cit.] and *T. triticoides* [ibid., 31, p. 323], 10° to 18° C. being the optimum for wheat growth and most favourable for bunt development in Hungary. The optimum soil humidity (in brown clay soil containing some Kiscell humus) for spore germination of *T. foetida* was 59 per cent. and for *T. triticoides* 71·2 to 84 per cent. There is a definite connexion between the distribution of these fungi and the quantity of rainfall in Hungary. The incidence of *T. foetida* is over 95 per cent. in regions with an annual rainfall below 600 mm., while that of *T. triticoides* is negligible. The latter, however, causes severe and large-scale damage in regions where rainfall exceeds 650 mm.

BOHUS, G.; SZABO, K.

Fungicidal effect of phenol derivatives. p. 105. Vol. 6, 1955
MAGYAR NEMZETI MUZEUM TERMESZETTUDOMANYI MUZEUM EVKONYVE. ANNALES HISTORICO-NATURALES MASEI NATIONALIS HUNGARICI. Budapest, Hungary.

Source: East European Accession List. Library of Congress
Vol. 5, No. 8, August 1956

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On the drought-resistance of fungi. In English. p.263.
(Magyar Nemzeti Muzeum Termezettudomanyi Muzeum Evkonyve, Vol. 7, 1956,
Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, no. 9, Sept. 1957. Uncl.

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GIAZ, Ervin, tudomanyos kutato; BOHUS, Gabor, a biologiai tudomanyok kandidatusa

Ergot alkaloid content of higher fungi. I. Magy. Tudom. Akad. Biol. Orv. Oszt. Kozl. 8 no.4:423-426 1957.

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(ERGOT ALKALOIDS, determ.
in Basidiomycetes strains (Hun))
(FUNGI
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Results in taxonomic and ecologic research relating to Agaricales.
III. p. 273

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Budapest, Hungary. Vol. 47, no. 3/4, 1958

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uncl.

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